

3 APRIL

Work Order ID 156676

156676

Page 1

Monday, February 06, 2017 1:04:50 PM

Item ID: D4049-041 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Mounting Lug Assembly, LH

Start Date: 3/15/2017 Start Qty: 1.00 *1*

Required Date: 3/20/2017 Req'd Qty: 1.00 *1*

Reference: Cust Item ID:

Customer:

Approvals: Process Plan: DAS 21 Date: FEB 07 2017 Tooling: Date: Run Start *NR1*

QC: 9-89 Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4049	C

100 Weld per dwg A/R S.S. rod Batch: H134442 0.00

100

Large Fab

Memo 0.30

Large Fab

1- Weld lug on bracket as per dwg D4049 using DT9584 jig

2- Tack weld a piece of s.s. rod on back of D4049-3 where lug is located, to hang the part when powdercoating.

1 Q / 7.3.15

110 QC9- Inspect visual per QSI004- Fusion Welds 0.00

110

QC

Memo 0.00

Quality Control

① 17.03.15 DAS 9 9-89

120 QC5- Inspect part completeness to step on W/O 0.00

120

QC

Memo 0.00

Quality Control

① 17.03.15 DAS 9 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
☐ OTHER : _____									

Work Order ID 156676***156676***

Page 2

Monday, February 06, 2017 1:04:50 PM

Item ID: D4049-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mounting Lug Assembly, LH
Start Date: 3/15/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/20/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel <i>17 B6657</i> Memo 1- POWDER COAT: Start Time: <i>11:40</i> Oven Temperature: <i>400°</i> Finish Time: <i>12:40</i> 2- When powdercoated, ONLY grind off welding rod flush 3- touch up with paint	0.00 0.03				<i>1</i>	<i>0</i>	<i>17-03-21</i>	<i>338</i>
140 *140* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<i>1</i>			<i>DAS 38 2-22-2017</i>

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Work Order ID 156676***156676***

Page 3

Monday, February 06, 2017 1:04:50 PM

Item ID: D4049-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mounting Lug Assembly, LH
Start Date: 3/15/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/20/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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145 *145* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo <i>NLA</i>	0.00 <i>DAS</i> <i>38</i> <i>0.00</i>							
--	--	--	--	--	--	--	--	--	--

150 *150* Packaging Packaging	Identify as per dwg & Stock Location: <i>Stob</i> Memo	0.00 0.00							
---	---	--------------	--	--	--	--	--	--	--

160 *160* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.02							
--	---	--------------	--	--	--	--	--	--	--

1 2/07 22 28 MAR 22 2017 *SEL* MAR 22 2017

17/3/03 *df*

mf
17-3-23

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
						QC / QA Coordinator Approval			

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐				
Misidentified ☐	☐	Past Due	☐				
				OTHER :			

Picklist Print

Monday, February 06, 2017 1:04:49 PM

Work Order ID: 156676

156676

Parent Item: D4049-041

D4049-041

Parent Item Name: Mounting Lug Assembly, LH

Start Date: 3/15/2017

Required Date: 3/20/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP RevA: new issue DD 10.02.11 verified by:JLM IPP Rev:B as
per dwg revA DD 10.02.18 verified by:EC IPP Rev:C as per revB
DD 10.04.23 verified by:EC IPP Rev:D 10.05.04 add note in seq
100 DD verified :EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4049-1		Manufactured	No			100	Each	0.0000	1	1			
D4049-1									**			<u>EL 17-3-15</u>	
Lug													
D4049-3		Manufactured	No			100	Each	3.0000	1	1			
D4049-3									**			<u>EL 17-3-15</u>	
Mounting Plate, LH													
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				WA002		3							
				132108		3							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

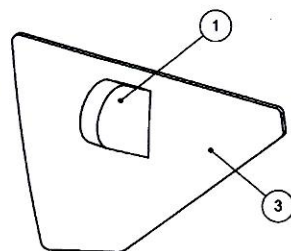
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By 	
								Lead hand / Supervisor Approval Verification 	
								QC / QA Coordinator Approval 	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____ _____ _____						
Misidentified	☐	Past Due	☐							

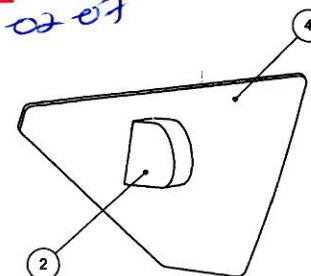
ITEM	QTY -041	QTY -042	P/N	DESCRIPTION
	X		D4049-041	MOUNTING LUG ASSY, LH
		X	D4049-042	MOUNTING LUG ASSY, RH
1	1		D4049-1	LUG
2		1	D4049-2	LUG
3	1		D4049-3	MOUNTING PLATE, LH
4		1	D4049-4	MOUNTING PLATE, RH

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 156676 MJS
17-02-07



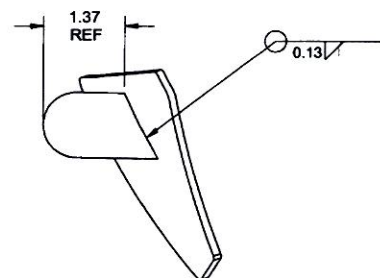
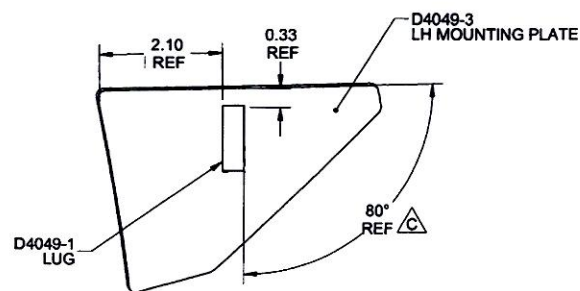
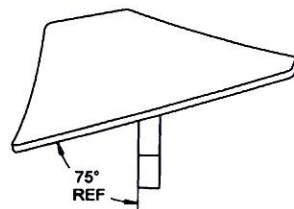
D4049-041 MOUNTING LUG ASSY, LH



D4049-042 MOUNTING LUG ASSY, RH

RELEASED
A-P 2015 JUN 22
EW 15-585

C	PER NCR 15-4825, ADD -141/-142; ZN B4-3, B8-3, B4-6, B3-5, ADD -11/-12; ZN A4-10, B2-11, ADD -13/-14; ZN C1-12, A1-12, REVISE DIM; ZN B5-3, B4-4, ADD -2 VIEW; ZN B2-7	VS	15.05.26
B	80" WAS 83", 0.33 WAS 0.55 & 2.10 WAS 2.50 (ZN C8-2)	RF	10.03.19
A	NEW ISSUE	RF	10.01.29
REV.	DESCRIPTION		BY DATE
DESIGN	VS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D4049 TITLE MOUNTING LUG ASSY DATE 15.05.26 COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DRAWN	VS		
CHECKED	RF		
MFG. APPR.	DD		
APPROVED	HS		
DE APPR.	DS	REV. C	SHEET 1 OF 12
		SCALE	NTS



8 **D4049-041 MOUNTING LUG ASSY, LH**

RELEASED
A.P. 2015 JUN 22

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "WHITE" (4.3.5.2) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4049-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.64 lbs
- 8) WELD PER DART QSI 004 USING WELDING JIG DT9584

APPROVED

DESIGN	VS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VS		
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	DD	D4049	SHEET 3 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	MOUNTING LUG ASSY	NTS
DATE	15.05.26	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	